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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,712	01/19/2001	Randy K. Young	201009/131	2864
<div>7590 Gunnar G. Leinberg NIXON PEABODY LLP Clinton Square P.O. Box 31051 Rochester, NY 14603</div>				
EXAMINER				
AGHDAM, FRESHTEH N				
ART UNIT		PAPER NUMBER		
2611				
MAIL DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/765,712

Applicant(s)

YOUNG, RANDY K.

Examiner

FRESHTEH N. AGHDAM

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 56-60, 62 and 65-128 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-19, 56-60, 62, 65-74, 77-81, 84-89, 92-96, 99-128 is/are rejected.
- 7) ☒ Claim(s) 10, 11, 20, 21, 75, 76, 82, 83, 90, 91, 97 and 98 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed May 27, 2008 have been fully considered but they are not persuasive.

Applicant's Argument(s):

Regarding the 112, 1st paragraph rejection of claims 56-60, 62, and 65-68, page 25, the applicant argues that 112, 1st paragraph is improper and refers to passages "page 6, line 30 to page 7, line 2; page 7, lines 8-10, 16-18, and 24-25; page 8, lines 12-18" to prove that there is support for the claimed subject matter in the patent application.

Regarding the pending claims, pages 26-28 the applicant argues that the claimed subject matter is not taught or suggested by Kroeger "a transmission system with a time scale and time delay encoding system which applies one of a plurality of time scales and one of a plurality of time delays to one of a pair of a matching base signal".

Examiner's Response:

Regarding the first argument set forth above, the examiner disagrees with the applicant because those passages are directed to summary of the invention in the patent application that only repeats (is the carbon copy of) the claimed subject matter in the recited claims. Therefore, the 112, 1st paragraph rejection is maintained.

Regarding the second argument set forth above, the examiner disagrees with the applicant because Kroeger teaches a transmission system with a time scale (data rate in the case of digital radio broadcast) and time delay encoding system which applies one of a plurality of time scales and one of plurality of time delays to one of a pair of a

matching base signal (the **primary** signal and the **redundant** signal; col. 7, lines 50-67; col. 8, lines 60-67; col. 9, lines 1-5).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 56-60, 62, 65-68, 101-109, and 116-124 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 56-60, 62, 65-68, 71, 101-109, and 116-124 claim time scaling is applied to the doublet; but on the contrary, according to the disclosure of the invention, the time scaling is applied to one of the pair of matched base signals (Fig. 2 and 5).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

((e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 5-6, 8-9, 15-16, 18-19, 69-73, 77, 79-80, 84, 88, 92, 95, 99-100, 110-113, 114-115, and 125-128 are rejected under 35 U.S.C. 102(e) as being anticipated by Kroeger et al (US 6,178,317).

As to claims 1, 8-9, 12, 15-16, 18-19, 69, 77, 80, 84, 92, 95, Kroeger discloses a communication method comprising: applying one of a plurality of time scales and one of a plurality of time delays to one of a pair of matched base signals, wherein the applied one of the plurality of time scales is less than one (the **primary** signal and the **redundant** signal; col. 7, lines 50-67; col. 8, lines 60-67; col. 9, lines 1-5); combining the time scaled and time delayed base signal with the other one of the pair of base signals to form a doublet; transmitting the doublet to the environment (through means 172); receiving the doublet (including a message embedded by the transmission system and imaging data embedded by the environment through means 142); and extracting information (audio signal) from the doublet based on the one of the plurality of time scales and on the one of the plurality of time delays which were applied (means 135 and 140).

As to claims 2, 5-6, 70, 72-73, 85, 88, 95, Kroeger discloses a communication system, wherein the transmission system comprises: a signal generator which generates a pair of matched base signals (Fig. 1, means 110); an encoding system which modulates one of a plurality of time scales (the **primary** signal and the **redundant** signal; col. 7, lines 50-67; col. 8, lines 60-67; col. 9, lines 1-5) and one of a plurality of time delays onto the one of the pair of substantially matched base signals; a

combiner (means 168) which combines the time scaled and time delayed base signal with the other one of the pair of base signals to form a doublet (means 168); and a transmitter which transmits the doublet (output of means 172).

As to claims 4, 13, 87, and 93, Kroeger discloses a communication method comprising: applying one of a plurality of time scales and one of a plurality of time delays to one of a pair of matched base signals, wherein the applied one of the plurality of time scales is less than one (the **primary** signal and the **redundant** signal; col. 7, lines 50-67; col. 8, lines 60-67; col. 9, lines 1-5); combining the time scaled and time delayed base signal with the other one of the pair of base signals to form a doublet; transmitting the doublet to the environment (through means 172); receiving the doublet (including a message embedded by the transmission system and imaging data embedded by the environment through means 142); and extracting information (audio signal) from the doublet based on the one of the plurality of time scales and on the one of the plurality of time delays which were applied (means 135 and 140). Kroeger does not expressly teach transmitting the pair of matched signals (after time scaling and time delaying) via two antennas (radiating elements). One of ordinary skill in the art would recognize that it is obvious (or a design choice) to transmit the pair of matched signals (after time scaling and time delaying) via two separate antennas instead of combining the pair of matched signals and then transmitting the doublet/composite signal via a single antenna as taught by Kroeger in order to obtain antenna diversity in addition to time and rate diversity. Therefore, it would have been obvious to one of ordinary skill in the art to transmit the pair of matched signals (after time scaling and time delaying) via

two separate antennas instead of combining the pair of matched signals and then transmitting the doublet/composite signal via a single antenna for the reason stated above.

As to claim 79, Kroeger further discloses imbedding additional information in one of the pair of matched base signals in the doublet (Col. 5, lines 25-30).

As to claims 99-100, 110-113, Kroeger discloses that the time scaling is applied without spread spectrum modulation (col. 7, lines 50-67; col. 8, lines 60-67; col. 9, lines 1-5).

As to claims 114-115, 125-128, Kroeger discloses that the signals to be combined to form the doublet are matched infrequency (the **primary** signal and the **redundant** signal; col. 7, lines 50-67; col. 8, lines 60-67; col. 9, lines 1-5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 17, 74, 81, 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroeger et al, and further in view of the instant application's disclosed prior art.

As to claims 7, 17, 74, 81, 96, Kroeger discloses a transmission system that includes a conditioning part (means 170). Kroeger does not expressly disclose that the conditioning part performs temporal and spectral equalization in order to distribute the pair of matched base signals evenly across the duration and the spectrum of the pair of matched base signals. However, one of ordinary skill in the art would recognize that signal conditioning prior to signal transmission, wherein the signal to be transmitted is temporally and spectrally equalized is well known in the art in order to prepare the signal for transmission as it is evidenced by the instant application's disclosed prior art (Pg. 12, lines 16-20). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Kroeger with the instant application's disclosed prior art for the reason stated above.

Claims 3, 14, 78, 86, 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroeger et al, and further in view of Weiss (US 2004/0260415).

As to claims 3, 14, 78, 86, 94, Kroesger discloses forming the doublet; transmitting the doublet signal; receiving the doublet signal; and extracting the information from the doublet signal based on one of the plurality of time scales and one of the plurality of time delays which were applied. Kroeger does not expressly disclose providing a plurality of doublets and combining all of the doublets to form a composite signal; transmitting the composite signal; and receiving the composite signal and extracting the information from the doublets that form the composite signal. Weiss discloses segmenting the audio signal and transmitting each segment of the audio signal by employing signal redundancy (Abstract). One of ordinary skill in the art would

recognize that employing redundancy by transmitting the same signal twice could be implemented by forming doublets, combining the doublets, and transmitting the composite signal via an antenna (e.g. reduced hardware complexity version). Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Kroeger using teaching of Weiss in order to increase data integrity and reduce hardware complexity together.

Allowable Subject Matter

Claims 10-11, 20-21, 75-76, 82-83, 90-91, and 97-98 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRESHTEH N. AGHDAM whose telephone number is (571)272-6037. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Freshteh N Aghdam/

Examiner, Art Unit 2611

Art Unit: 2611

/Chieh M Fan/

Supervisory Patent Examiner, Art Unit 2611